

Units of Measure

Radioactivity	<i>Symbol</i>	<i>Name</i>	Volume	<i>Symbol</i>	<i>Name</i>
	Ci	curie		cm ³	cubic centimeter
	mCi	millicurie (1E-03 Ci)		L	liter
	μCi	microcurie (1E-06 Ci)		mL	milliliter
	nCi	nanocurie (1E-09 Ci)		m ³	cubic meter
	pCi	picocurie (1E-12 Ci)		gal	gallon
	Bq	becquerel (27 pCi)		ft ³	cubic feet
				ppm	parts per million
				ppb	parts per billion
Dose	<i>Symbol</i>	<i>Name</i>	Area	<i>Symbol</i>	<i>Name</i>
	Sv	sievert (100 rems)		ha	hectare (10,000 m ²)
	mSv	millisievert (1E-03 Sv)			
	Gy	gray (100 rads)			
	mrem	millirem(1E-03rem)			
Concentration	<i>Symbol</i>	<i>Name</i>	Length	<i>Symbol</i>	<i>Name</i>
	μCi/mL	microcuries per milliliter		m	meter
	mL/L	milliliters per liter		km	kilometer (1E+03 m)
	μCi/g	microcuries per gram		cm	centimeter (1E-02 m)
	mg/L	milligrams per liter		mm	millimeter (1E-03 m)
	μg/mL	micrograms per milliliter		μm	micrometer (1E-06 m)
	pCi/L	picocuries per liter			
Mass	<i>Symbol</i>	<i>Name</i>	Flow Rate	<i>Symbol</i>	<i>Name</i>
	g	gram		mgd	million gallons per day
	kg	kilogram (1E+03 g)		cfm	cubic feet per minute
	mg	milligram (1E-03 g)		Lpm	liters per minute
	μg	microgram (1E-06 g)		gpd	gallons per day
	ng	nanogram (1E-09 g)			
	t	metric ton (1E+06 g)			

Unit Prefixes

centi	$1/100 = 1 \times 10^{-2} = 0.01 = E-02$
milli	$1/1,000 = 1 \times 10^{-3} = 0.001 = E-03$
micro	$1/1,000,000 = 1 \times 10^{-6} = 0.000001 = E-06$
nano	$1/1,000,000,000 = 1 \times 10^{-9} = 0.000000001 = E-09$
pico	$1/1,000,000,000,000 = 1 \times 10^{-12} = 0.000000000001 = E-12$

Scientific Notation

Scientific notation may be used to express very large or very small numbers. A number smaller than 1 is expressed with a negative exponent (e.g., 1.3×10^{-6}). To convert this number to decimal form, the decimal point is moved left by the number of places equal to the exponent. Thus, 1.3×10^{-6} becomes 0.0000013.

A number larger than 10 is expressed with a positive exponent (e.g., 1.3×10^6). To convert this number to decimal form, the decimal point is moved right by the number of places equal to the exponent. Thus, 1.3×10^6 becomes 1,300,000.

The power of 10 also is expressed as E. For example, 1.3×10^{-6} also can be written as 1.3E-06. The chart below shows equivalent exponential and decimal values.

1.0×10^2	=	1E+02	=	100
1.0×10^1	=	1E+01	=	10
1.0×10^0	=	1E+00	=	1
1.0×10^{-1}	=	1E-01	=	0.1
1.0×10^{-2}	=	1E-02	=	0.01
1.0×10^{-3}	=	1E-03	=	0.001
1.0×10^{-4}	=	1E-04	=	0.0001
1.0×10^{-5}	=	1E-05	=	0.00001
1.0×10^{-6}	=	1E-06	=	0.000001
				One Millionth
1.0×10^{-7}	=	1E-07	=	0.0000001
1.0×10^{-8}	=	1E-08	=	0.00000001

Conversion Chart

Both traditional radiological units (curie, roentgen, rad, rem) and the Systeme Internationale (S.I.) units (becquerel, gray, sievert) are used in this report. Nonradiological measurements are presented in metric units with the English equivalent noted in parentheses.

1 centimeter (cm)	=	0.3937 inches (in)
1 meter (m)	=	39.37 inches (in) = 3.28 feet (ft)
1 kilometer (km)	=	0.62 miles (mi)
1 milliliter (mL)	=	0.0338 ounces (oz)
	=	0.061 cubic inches (in ³)
	=	1 cubic centimeter (cm ³)
1 liter (L)	=	1.057 quarts (qt)
	=	61.02 cubic inches (in ³)
1 gram (g)	=	0.0353 ounces (oz)
	=	0.0022 pounds (lbs)
1 kilogram (kg)	=	2.2 pounds (lbs)
1 curie (Ci)	=	3.7×10^{10} disintegrations per second (d/s)
1 becquerel (Bq)	=	1 disintegration per second (d/s)
	=	27 picocuries (pCi)
1 roentgen (R)	=	2.58×10^{-4} coulombs per kilogram of air (C/kg)
1 rad	=	0.01 gray (Gy)
1 rem	=	0.01 sievert (Sv)
1 millirem (mrem)	=	0.001 rem